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Could wind power work for you?

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A major new report aimed at helping the public and businesses understand the potential for small wind power generation at their sites has been launched.

The report, based on research by Met Office Consulting and Entec and supported by the Carbon Trust, aims to improve understanding about the potential for small-scale wind energy in the UK. It also includes insights and recommendations for government policy makers.

A key finding of the report is the overall potential 'carbon prize' for the UK - how much carbon could be saved if small wind turbines were widely deployed. An annual saving of 0.6 million tonnes of carbon dioxide is possible if 10% of the population installed turbines, generating 1.5 TWh of electricity.

Other findings concern the imbalance in potential between rural and urban sites. The carbon prize for rural sites is about four times that of urban sites due to higher wind-speed conditions. Indeed some urban sites may not pay back the carbon embedded in manufacturing, production and installation of the turbine.

The effectiveness of wind generation has been calculated using historical climate data, details of urban population density and the orography of the land.

Cathy Durston, Head of Met Office Consulting, said: "Tackling the challenges of our changing climate should be a key concern for all of us. This report will help both households and manufacturers better understand the benefits and risks of small-scale wind generation.

"The Met Office has welcomed the opportunity to work with the Carbon Trust to research the potential carbon savings of small-scale wind power, and we hope now to use our expertise and expand this important work to major renewable energy projects."

John Callaghan, Senior Manager at the Carbon Trust, added: "This research sheds new light on the potential for small-scale wind energy in the UK, and we hope will be of interest to both government policymakers and people considering installing small wind turbines. The Met Office's world class scientific knowledge and expert modelling capabilities have added great value to the work, and we look forward to further opportunities to work together in future."

Notes:

- The Carbon Trust report, and a companion Technical Report by the Met Office, is available online from the Carbon Trust.
- The Carbon Trust is an independent company set up by government to accelerate the move to a low carbon economy by working with organisations to reduce carbon emissions and develop commercial low carbon technologies.
- As a follow-on project, the Carbon Trust is preparing a web-based calculation tool to help organisations interested in installing small wind turbines evaluate conditions at their sites. This incorporates wind-speed data from the Met Office. The tool is planned for release later in Summer 2008.

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